ONE HUNDRED PHOTOGRAPHIC FORMULÆ.

THE INDISPENSABLE COMPANION TO THE LABORATORY.

CONTAINING MOST USEFUL FORMULÆ USED IN PHOTOGRAPHY AND ITS BRANCHES. COLLECTED FROM THE MOST RELIABLE SOURCES, AND CONVENIENTLY ARRANGED FOR READY REFERENCE.

BY

W. INGLES ROGERS,

AUTHOR OF "PHOTOGRAPHIC GEMS," ETC.

WITH A USEFUL APPENDIX.

PRICE SIXPENCE.

London:

HAZELL, WATSON, & VINEY, LD.,

1, CREED LANE, LUDGATE HILL.

Printed by Hazell, Watson, & Viney, Ld., London and Aylesbury.

PREFACE.

During the summer of last year the compiler of the present little volume had the pleasure of visiting a large number of studios (both amateur and professional), and the one thing he noticed above all others was the very uncertain way in which the formulæ relating to the various processes were kept.

In some cases the walls of the "dark-rooms" were literally covered with clippings from books and journals, whereby the said books and journals were, of course, deprived of their completeness and utility; and not only that, but through the dampness of the walls and the action of the chemicals, the figures were well-nigh obliterated, and required a very keen eye to distinguish them. In the others, bottles themselves were plastered with labels bearing in almost undecipherable characters the necessary instructions for the preparation of their contents; while in many instances no formulæ at all were observable, the manipulators trusting solely to their memory in the preparation of such solutions as were in daily use, and to their facility in digging out of their mine of photographic literature the particular nugget they required for any special purpose.

It was to improve this state of affairs that the present little work was compiled; and if, during his next round of visits, the compiler finds a copy of it in every studio, he will be amply repaid for the trouble he has taken in compiling it.

St. Germans, Cornwall.

CONTENTS.

WET COLLODION PROCESS.

1.—PLAIN COLLODION.

Alcohol	5 ounces.
Ether	10 „
Pyroxyline	100 grains.

2.—NEGATIVE COLLODION.

Alcohol	2 ounces.
Ether	2 „
Pyroxyline	20 grains.
Iodide of Ammonium	20 „
Bromide of Cadmium	8 „

3.—POSITIVE COLLODION.

Alcohol	10 ounces.
Ether	10 „
Pyroxyline	100 grains.
Iodide of Cadmium	50 „
Bromide of Ammonium	20 „

4.—COLLODION FOR THE REPRODUCTION OF LINE WORK.

Plain Collodion	28 ounces.
Chloride of Calcium	18 grains.
Iodide of Ammonium	60 „
„ Cadmium	100 „
Absolute Alcohol	3 ounces.

5.—NEGATIVE SILVER BATH.

Nitrate of Silver (recrystallized) ...	6 ounces.
Distilled Water	80 „
Nitric Acid	10 minims.

Saturate with Iodide of Silver and filter.

6.—POSITIVE SILVER BATH.

Nitrate of Silver (recrystallized) ...	5 ounces.
Distilled Water	80 „
Nitric Acid	12 minims.

Saturate with Iodide of Silver and filter.

7.—SILVER BATH FOR LINE WORK.

A	Nitrate of Silver (recrystallized) ...	1 ounce.
	Distilled Water	15 ounces.
	Nitric Acid	5 minims.
B	Iodide of Potassium	30 grains.
	Iodine	5 „
	Distilled Water	5 ounces.

To 15 ounces of A add 1 dram of B.

8.—NEGATIVE DEVELOPER.

Protosulphate of Iron	2 drams.
Glacial Acetic Acid	2 „
Alcohol	4 „
Water	8 ounces.

9.—POSITIVE DEVELOPER.

Protosulphate of Iron	1½ ounce.
Nitrate of Baryta	1 „
Alcohol	1 „
Nitric Acid	40 drops.
Water	1 pint.

10.—DEVELOPER FOR COLLODION TRANSFERS.

Pyrogallic Acid	5 grains.
Citric Acid	3 „
Acetic Acid	45 minims.
Water	1 ounce.
Alcohol	quant. suff.

11.—DEVELOPER FOR LINE WORK.

Protosulphate of Iron	50 grains.
Tartaric Acid	10 „
Water	2 ounces.

12.—NEGATIVE FIXING BATH.

Hyposulphite of Soda	8 ounces.
Water	10 „

13.—POSITIVE FIXING BATH.

Cyanide of Potassium	1 dram.
Water	8 ounces.

14.—WET PLATE INTENSIFIER.

Pyrogallic Acid	40 grains.
Citric Acid	60 „
Water	20 ounces.

Add a few drops of a 30-grain solution of Nitrate of Silver to each ounce.

15.—SOLUTION FOR CLEANING THE GLASS PLATES.

Iodine	1 dram.
Tripoli	3 ounces.
Methylated Spirit	1 pint.

16.—VARNISH FOR WET-PLATE NEGATIVES.

Gum Sandarac	6 ounces.
Gum Shellac	1 ounce.
Turpentine	2½ ounces.
Oil of Lavender	2 „
Methylated Spirit	40 „

DRY COLLODION PROCESS.

17.—PYROXYLINE FOR COLLODIO-BROMIDE EMULSION.

Nitric Acid	2 ounces.
Sulphuric Acid	4 „
Water	1 ounce.
Cotton (cleaned and carded) ...	100 grains.
Temperature	150 deg. Fahr.
Time of Immersion	10 minutes.

18.—WASHED EMULSION (SLOW).

Alcohol	2½ ounces.
Ether	4 „
Pyroxyline	40 grains.
Castile Soap dissolved in Alcohol	30 „
Bromide of Cadmium and Ammonium	84 „

Sensitize with 100 grains of Nitrate of Silver dissolved in 1 ounce of boiling alcohol, and after standing 10 days, add 20 grains more of silver dissolved in 2 drams of alcohol.

19.—WASHED EMULSION (RAPID).

Alcohol	2½ ounces.
Ether	4 „
Pyroxyline	40 grains.
Castile Soap dissolved in Alcohol	30 „
Bromide of Cadmium and Ammonium	56 „

Sensitize with 125 grains of Nitrate of Silver dissolved in 1 ounce of alcohol, without heat, and in 12 hours' time add 30 grains more of the double bromide of cadmium and ammonium dissolved in half-ounce of alcohol.

20.—PYROXYLINE FOR WASHED EMULSION.

Nitric Acid	2 ounces.
Sulphuric Acid	6 „
Water	1 ounce.
Cotton (cleaned and carded) ...	100 grains.
Temperature	140 deg. Fahr.
Time of Immersion	10 minutes.

21.—COLLODIO-BROMIDE EMULSION.

Alcohol	2½ ounces.
Ether	4 „
Pyroxyline	40 grains.
Bromide of Cadmium and Ammonium	80 „

Sensitize by adding to each ounce 15 grains of Nitrate of Silver dissolved in a few drops of water and one dram of boiling alcohol.

22.—WASHED EMULSION FOR TRANSPARENCIES.

Alcohol	3 ounces.
Ether	5 „
Pyroxyline	60 grains.
Bromide of Cadmium and Ammonium	100 „
Hydrochloric Acid	8 minims.

Sensitize with 20 grains of Nitrate of Silver to the ounce dissolved in a minimum of water with 2 drams of boiling alcohol. Allow to stand for 2 or 3 days.

23.—ORGANIFIER (FOR LANDSCAPE EMULSION).

Tannin	300 grains.
Water	20 ounces.

24.—ORGANIFIER (WARM-BROWN TONE).

Freshly-ground Coffee	1 ounce.
Boiling Water	1 pint.

25.—ORGANIFIER (BROWNISH-BLACK TONE).

Tannin	30 grains.
Pyrogallic Acid	60 „
Water	20 ounces.

26.—INTENSIFIER FOR COLLODION EMULSION.

Nitrate of Silver	60 grains.
Citric Acid	30 „
Nitric Acid	30 minims.
Water	2 ounces.

To each dram of a 3-grain solution of Pyrogallic Acid add 2 or 3 minims of the above, and apply until sufficient density is obtained.

27.—DEVELOPING SOLUTIONS FOR COLLODION EMULSION.

A	Pyrogallic Acid	96 grains.
	Alcohol	1 ounce.
B	Bromide of Potassium	10 grains.
	Water	1 ounce.
C	Liquor Ammonia, ·880	1 dram.
	Water	15 drams.

For each dram of developer take, for a normal exposure, 5 minims of A, 2 minims of B, and 2 minims of C.

ALBUMEN PROCESS.

28.—SUBSTRATUM.

Albumen from fresh eggs ...	26 drams.
Iodide of Ammonium	15 grains.
Bromide of Potassium	4 „
Iodine	4 „

29.—SENSITIZER.

Nitrate of Silver	155 grains.
Glacial Acetic Acid	2½ drams.
Distilled Water	4 ounces.

30.—DEVELOPER.

Gallic Acid	1 dram.
Water	10 ounces.
Solution of Aceto-nitrate of Silver (1 to 30)	5 minims.

HONEY PROCESS.

31.—SUBSTRATUM.

Albumen	8 ounces.
Honey	7 „
Iodide of Potassium	3 drams.
Bromide of Potassium	20 grains.
Chloride of Sodium	10 „
Water	2 ounces.

32.—SENSITIZER.

Nitrate of Silver	1 ounce.
Acetic Acid	10 drams.
Water	10 ounces.

For developer see No. 30.

FERROTYPE PROCESS.

33.—FERROTYPE COLLODION.

Alcohol	5 ounces.
Ether	5 „
Pyroxyline	25 grains.
Iodide of Cadmium	20 „
Iodide of Ammonium	30 „
Iodide of Sodium	10 „
Bromide of Cadmium	20 „

34.—DEVELOPER FOR FERROTYPES.

Protosulphate of Iron and Ammonia	4 ounces.
Acetic Acid	4 „
Yellow Rock Candy	½ ounce.
Water	64 ounces.

Fixing Bath.—See No. 13.

35.—SILVER BATH FOR FERROTYPES.

Nitrate of Silver	4 ounces.
Iodide of Potassium	2 grains.
Water	64 ounces.

Dissolve, sun for 3 or 4 hours, filter, and acidulate.

GELATINE DRY-PLATE PROCESS.

36.—EMULSION (ORDINARY).

A	Nelson's No. 1 Gelatine	160 grains.
	Hard Gelatine	200 „
	Bromide of Potassium	40 „
	Iodide	2 „
	Water	4 ounces.
B	Nitrate of Silver	60 grains.
	Water	4 ounces.

The Nitrate of Silver should be precipitated and re-dissolved by strong ammonia, and the solutions mixed at 100 deg. Fahr., and kept at that temperature till blue.

37.—EMULSION (VERY RAPID).

In one vessel put

Nelson's No. 1 Gelatine	24 grains.
Bromide of Ammonium	120 „
Iodide of Potassium	5 „
Water	2½ ounces.

Dissolve the above with heat; when cooled down add

Liquor Ammonia, ·880	1½ drams.
Alcohol	5 „
Water	10 „

Stir well, then add in a fine stream, with constant agitation,

Nitrate of Silver	180 grains.
Water	12 drams.

Keep in the dark without heat for 24 hours.

In another vessel put

Nelson's No. 1 Gelatine	20 grains.
Bromide of Ammonium	160 „
Iodide of Potassium	5 „
Carbonate of Ammonia	60 „
Water	4 ounces.

Dissolve with heat; when cool add in a fine stream, constantly stirring,

Ammonio-nitrate of Silver ...	240 grains.
Water	4 ounces.
Nitric Acid	2 minims.

Place in a vessel of boiling water and put aside for 24 hours. Then, in the first emulsion, put 240 grains dry gelatine, and dissolve with gentle heat; to the second emulsion add 360 grains gelatine and dissolve; then mix both emulsions together, stir well, and let remain for another 24 hours; then break up, wash, and filter.

38.—EMULSION (BURTON'S).

A	Methylated Spirit	10 ounces.
	Salicylic Acid	100 grains.
B	Nelson's No. 1 Gelatine	80 grains.
	Bromide of Ammonium	280 „
	Iodide of Ammonium	24 „
	Water	5½ ounces.
	Solution A	2½ „

Dissolve B by heat and add

C	Nitrate of Silver	400	grains.
	Water	7	ounces.
	Convert to Ammonio-nitrate making	8	„

Heat to 140 deg., and keep up temperature till blue.

39.—EMULSION (AMMONIA METHOD).

In Distilled Water	8½	ounces
dissolve		
Gelatine (previously swelled) ...	50	grains.
Bromide of Ammonium	308	„
When cold add		
Alcohol	1½	ounce.
Liquor Ammonia	½	„
Water	1½	„
In Distilled Water	3½	ounces
dissolve by heat		
Nitrate of Silver	462	grains,

and add gradually to the gelatine solution.

Finally add

Gelatine	220	grains.

Wash and filter.

40.—CHLORIDE EMULSION (FOR TRANSPARENCIES).

A	Gelatine	300	grains.
	Water	4	ounces.
B	Nitrate of Silver	240	grains.
	Water	2	ounces.
C	Chloride of Ammonium	100	grains.
	Water	4	ounces.

When A is dissolved add B and then C.

41.—ORTHOCHROMATIC EMULSION.

Gelatine	20 grains.
Bromide of Potassium	135 „
Erythrosine (purified) Solution ...	30 „
Water	1,000 „

Heat to 150 deg. and add slowly

Nitrate of Silver	170 grains.
Water	1,000 „

Heat till blue, then stir in 200 grains of gelatine previously soaked in water, and set aside to ripen.

42.—PYRO DEVELOPER (ORDINARY).

A	Pyrogallic Acid	30 grains.
	Water	10 ounces.
B	Liquor Ammonia, ·880	14 drams.
	Bromide of Potassium	200 grains.
	Water	80 ounces.

Use in equal volumes.

43.—FERROUS OXALATE DEVELOPER (ORDINARY).

A	Neutral Oxalate of Potash ...	8 ounces.
	Boiling Water	1 pint.
B	Protosulphate of Iron	12 ounces.
	Boiling Water	1 pint.
C	Bromide of Potassium	20 grains.
	Water	1 ounce.

For use

A Solution	2 ounces.
B „	½ ounce.
C „	4 drops.

44.—SODA DEVELOPER.

Washing Soda	4 ounces.
Water	1 quart.

For use add 2 grains dry pyro to every ounce of solution, only adding bromide when necessary.

45.—POTASH DEVELOPER.

A	Pyrogallic Acid	1 ounce.
	Sulphite of Soda	3½ ounces.
	Sulphurous Acid	3½ „
	Warm Water	5 „
B	Carbonate of Potash	3 ounces.
	Sulphite of Soda	2½ „
	Water	10 „
C	Bromide of Potassium	1 ounce.
	Water	10 ounces.

For use to each ounce of water add 20 minims No. 1 and 30 minims No. 2. For over-exposure a few drops of No. 3.

46.—CARBONATE OF AMMONIA DEVELOPER.

A	Pyrogallic Acid	½ ounce.
	Alcohol	9 ounces.
	Bromide of Ammonium	50 grains.
B	Carbonate of Ammonia	1½ ounce.
	Water	30 ounces.

For use add 15 minims of A to 1 ounce of B.

47.—HYDROQUINONE DEVELOPER.

Hydroquinone	1 part.
Sulphite of Soda	2 parts.
Carbonate of Soda	10 „
Water	67 „

48.—EIKONOGEN DEVELOPER.

A	Eikonogen	1 part.
	Sulphite of Sodium	4 parts.
	Water	60 „
B	Carbonate of Soda	3 parts.
	Water	20 „

For use mix 3 parts A to 1 part B.

49.—META-BISULPHITE DEVELOPER.

A	Pyrogallic Acid	1 part.
	Meta-bisulphite of Potash ...	¼ „
	Water	10 parts.
B	Carbonate of Potash	1 part.
	Meta-bisulphite of Potash ...	¼ „
	Water	10 parts.

For use mix A and B in equal quantities; no bromide is required.

50.—PYROCATECHIN DEVELOPER.

A	Pyrocatechin	1 part.
	Sulphite of Soda	4 parts.
	Water	40 „
B	Potash	4 parts.
	Water	40 „

For use mix 1 part of A with 2 parts of B.

51.—DEVELOPER FOR OVER-EXPOSED PLATES.

Pyrogallic Acid	2 grains.
Ammonia	4 minims.
Bromide	2 grains.
Water	1 ounce.

52.—DEVELOPER FOR CHLORIDE PLATES.

A	Citric Acid	120 grains.
	Carbonate of Ammonia	88 „
	Water	1 ounce.
B	Sulphate of Iron	140 grains.
	Sulphuric Acid	1 drop.
	Water	1 ounce.

For use add 1 part of B to 3 parts of A.

53.—FIXING BATH.

Hyposulphite of Soda	4 ounces.
Water	20 ounces.

54.—CLEARING BATH.

Alum	1 ounce.
Water	20 ounces.
Sulphuric Acid	½ ounce.

55.—BATH FOR HARDENING THE FILM.

Sulphite of Soda	154 grains.
Tannin	30 „
Water	18 ounces.
Nitric Acid	1 dram.

56.—BATH FOR ELIMINATING GREEN FOG.

Perchloride of Iron	50 grains.
Bromide of Potassium	30 „
Water	4 ounces.

After immersing in above till whitened, wash, and treat with ordinary ferrous oxalate developer till density is restored.

57.—HYPO ELIMINATOR.

Peroxide of Hydrogen	1 dram.
Water	5 ounces.

58.—INTENSIFIER.

A	Bichloride of Mercury	½ ounce.
	Sal Ammoniac	½ „
	Water	12 ounces.
	Liquid Ammonia	2 drams.
	Water	6 ounces.

Whiten in A, wash, and restore density in B.

59.—HYDROQUINONE INTENSIFIER.

A	Hydroquinone	10 parts.
	Citric Acid	6 „
	Water	1,000 „
B	Silver Nitrate	1 part.
	Water	30 parts.

Mix 3 of A to 1 of B and pour it over the negative.

60.—REDUCER.

A	Alum	4 ounces.
	Sulphate of Copper	4 „
	Chloride of Sodium	8 „
	Water	1 quart.
B	Saturated Solution of Common Salt.	

Mix A and B in equal parts.

61.—NEGATIVE VARNISH.

Sandarac	4 ounces.
Alcohol	24 „
Oil of Lavender	3 „
Chloroform	5 drams.

GELATINE FILM PROCESS.

62.—DEVELOPER.

A	Pyrogallic Acid	1 ounce.
	Sulphite of Soda	8 ounces.
	Water	1 quart.
B	Carbonate of Soda	4 ounces.
	Water	1 quart.
For use		
	A Solution	1 ounce.
	B „	1 „
	Water	2 ounces.
	Bromide of Potassium Solution (1 to 6)	20 minims.

63.—FIXING BATH.

Hyposulphite of Soda	4 ounces.
Water	16 „

64.—CLEARING SOLUTION.

Acetic Acid	1 dram.
Water	30 ounces.

KALLITYPE PROCESS.

65.—DEVELOPER.

Nitrate of Silver	50 grains.
Citrate of Soda	800 „
Bichromate of Potash	2 grains.
Water	10 ounces.

SILVER PRINTING.

66.—SILVER BATH.

Silver Nitrate	50 grains.
Water	1 ounce.

67.—SILVER BATH FOR DURABLE PAPER.

Silver Nitrate	1 ounce.
Citric Acid	1 „
Alcohol	1 „
Water	12 ounces.

68.—ACETATE TONING BATH.

Chloride of Gold	1 grain.
Acetate of Soda	30 grains.
Water	8 ounces.

69.—BORAX TONING BATH.

Chloride of Gold	1 grain.
Borax	90 grains.
Water	15 ounces.

70.—BICARBONATE TONING BATH.

Chloride of Gold	1 grain.
Bicarbonate of Soda	4 grains.
Water	8 ounces.

71.—PHOSPHATE TONING BATH.

Chloride of Gold	1 grain.
Phosphate of Soda	20 grains.
Water	8 ounces.

72.—LIME TONING BATH.

Chloride of Gold	1 grain.
Precipitated Chalk	10 grains.
Sat. Sol. Chloride of Lime ...	1 drop.
Boiling Water	8 ounces.

Use when cool.

73.—LEAD TONING BATH.

Acetate of Lead	½ ounce.
Hyposulphite of Soda	4 ounces.
Water	1 pint.

This bath requires no gold and fixes as well.

74.—URANIUM TONING BATH.

Chloride of Gold	1 grain.
Nitrate of Uranium	1 „
Acetate of Soda	2 grains.
Common Salt	2 „
Water	12 ounces.

75.—FIXING BATH.

Hyposulphite of Soda	4 ounces.
Water	1 pint.

76.—COMBINED FIXING AND TONING BATH.

Chloride of Gold	1 grain.
Phosphate of Soda	15 grains.
Sulphocyanide of Ammonium ...	25 „
Hyposulphite of Soda	240 „
Water	2 ounces.

77.—RED PRINTS FOR PHOTO-ENGRAVERS.

Citric Acid	100 grains.
Chloride of Ammonium	100 „
Gelatine	10 „
Water	10 ounces.

Dissolve the Citric Acid in water and neutralize with 228 grains common washing soda. Float the paper on this bath for 2 minutes and sensitize on Silver Bath (see No. 66).

ARISTOTYPE.

78.—ARISTOTYPE TONING BATH.

Chloride of Gold	1 grain.
Sat. Sol. of Borax	1 ounce.
Water	4 ounces.

79.—ARISTOTYPE FIXING BATH.

Hyposulphite of Soda	3 ounces.
Water	10 „

BROMIDE PRINTING.

80.—DEVELOPER FOR "ALPHA" PAPER.

A	Neutral Oxalate of Potash ...	16 ounces.
	Bromide of Ammonium	320 grains.
	Warm Water	64 ounces.
B	Sulphate of Iron	4½ ounces.
	Citric Acid	½ ounce.
	Water	80 ounces.

For use add 1 of B to 3 of A.

81.—TONING AND FIXING BATH FOR "ALPHA" PAPER.

Stock Solution of Gold.

Chloride of Gold	15 grains.
Water	15 drams.

Stock Solution of Gold	4 drams.
Acetate of Soda	½ ounce.
Sulphocyanide of Ammonium ...	4 ounces.
Hyposulphite of Soda	2½ „
Water	10 „

82.—DEVELOPER FOR EASTMAN'S BROMIDE PAPER.

A	Neutral Oxalate of Potash ...	16 ounces.
	Hot Water	48 „
B	Protosulphate of Iron	16 ounces.
	Sulphuric Acid	½ dram.
	Hot Water	32 ounces.
C	Bromide of Potassium	1 ounce.
	Water	32 ounces.

For use—A 6 ounces, B 1 ounce, C 1 dram.

83.—FIXING BATH.

Hyposulphite of Soda	3 ounces.
Water	16 „

84.—CLEARING BATH.

Acetic Acid	1 dram.
Water	32 ounces.

85.—DEVELOPER FOR EASTMAN'S TRANSFEROTYPE PAPER.

A	Neutral Oxalate of Potash ...	1 lb.
	Acetic Acid	3 drams.
	Hot Water	48 ounces.
B	Protosulphate of Iron	1 lb.
	Acetic Acid	1 dram.
	Hot Water	32 ounces.
C	Bromide of Potassium	1 ounce.
	Water	32 ounces.

For use—A 6 ounces, B 1 ounce, C ½ dram. Fixing bath (83).

86.—DEVELOPER FOR BROMIDE OPALS.

A	Neutral Oxalate of Potash ...	1 lb.
	Bromide of Ammonium	20 grains.
	Water	64 ounces.
B	Sulphate of Iron	1 lb.
	Citric Acid	½ ounce.
	Water	48 ounces.

For use add 1 ounce of B to 5 ounces of A.

87.—FIXING BATH.

Hyposulphite of Soda	1 lb.
Water	80 ounces.

88.—CLEARING BATH.

Alum	4 ounces.
Citric Acid	1 ounce.
Water	80 ounces.

89.—INTENSIFIER FOR BROMIDE PRINTS AND OPALS.

A	Perchloride of Iron	120 grains.
	Alum	2 ounces.
	Citric Acid	½ ounce.
	Water	60 ounces.
B	Sat. Sol. Bichloride of Mercury ...	1 ounce.
	Water	10 ounces.
C	Sulphite of Soda	4 ounces.
	Water	60 ounces.

Immerse in A, wash, bleach in B, and restore in C.

PLATINUM PROCESS.

90.—PLATINUM DEVELOPER.

Neutral Oxalate of Potash ...	130 grains.
Water	1 ounce.

91.—PLATINUM FIXER.

Hydrochloric Acid	1 ounce.
Water	80 ounces.

CARBON PROCESS.

92.—SENSITIZING BATH FOR CARBON TISSUE.

Bichromate of Potash	1 ounce.
Liquor Ammonia	6 minims.
Water	20 ounces.

93.—WAXING SOLUTION.

Beeswax	20 grains.
Benzole	4 ounces.

IRON PROCESS.

94.—SENSITIZER.

A	Ammonio-citrate of Iron	2 ounces.
	Water	8 „
B	Ferricyanide of Potassium ...	2 ounces.
	Water	8 „

Mix A and B in equal proportions.

MISCELLANEOUS.

95.—GROUND GLASS VARNISH.

Best Gelatine	5 ounces.
Glycerine	½ ounce.
Oxide of Zinc	1 „
Water	20 ounces.

96.—COLOURED VARNISH.

Turmeric	½ lb.
Gamboge	2 ounces.
Yellow Sandal Wood	2 „
Shellac	½ lb.
Alcohol	1½ lbs.

97.—FLASH-LIGHT MIXTURE.

Permanganate of Potassium	...	2 parts.
Bichromate of Potassium	...	2 „
Powdered Magnesium ...	...	1 part.

98.—MOUNTING MEDIUM.

Gelatine	...	2 ounces.
Glycerine	...	½ ounce.
Methylated Spirit	... ...	2 ounces.
Water	...	8 „

99.—INK FOR WRITING ON PHOTOGRAPHS.

Iodide of Potassium	... ...	10 parts.
Iodine	...	1 part.
Gum	...	1 „
Water	...	30 parts.

100.—SOLUTION FOR RESTORING FOGGED PLATES.

Bichromate of Potash	... ...	1 ounce.
Hydrochloric Acid	... ...	2 drams.
Water	...	10 ounces.

APPENDIX.

WEIGHTS AND MEASURES.

APOTHECARIES' WEIGHT.

20 Grains	= 1 Scruple	=	20	Grains.
3 Scruples	= 1 Dram	=	60	„
8 Drams	= 1 Ounce	=	480	„
12 Ounces	= 1 Pound	=	5,760	„

AVOIRDUPOIS WEIGHT.

27½ Grains	= 1 Dram	=	27½	Grains.
16 Drams	= 1 Ounce	=	437½	„
16 Ounces	= 1 Pound	=	7,000	„

FLUID MEASURE.

60 Minims	= 1 Dram	=	60	Minims.
8 Drams	= 1 Ounce	=	480	„
20 Ounces	= 1 Pint	=	9,600	„
2 Pints	= 1 Quart	=	19,200	„
4 Quarts	= 1 Gallon	=	76,800	„
8 Pints	= 1 Gallon	=	76,800	„

NOTE.—Apothecaries' weight is that generally adopted in the foregoing formulæ.

PRICES OF CHEMICALS USED

IN THE

FOREGOING FORMULÆ.

(These prices are subject to fluctuations.)

	per oz.		per lb.	
	s.	*d.*	*s.*	*d.*
Acid, Citric	0	3	2	0
„ Gallic	0	5	4	3
„ Glacial Acetic	0	2	1	0
„ Hydrochloric	—		0	2
„ Nitric	0	2	1	0
„ Pyrogallic	1	0	—	
„ Salicylic	0	9	10	6
„ Sulphuric	—		0	2
Albumen	—		6	0
Alcohol	0	3	3	6
Alum	—		0	2
Ammonia, Liquor, 880 degrees ...	0	1	0	7
Ammonium, Bromide	0	3	2	4
„ Carbonate	0	1	0	8
„ Iodide	1	6	—	
Benzole (2*s.* per pint.)				
Borax	—		0	8
Cadmium, Bromide	0	7	—	
„ Iodide	1	3	—	
Calcium, Bromide	0	9	8	0
Chalk, prepared	—		0	2
Chloroform	0	6	5	6
Copper, Sulphate	—		0	4
Eikonogen	1	6	3	0

	per oz.		per lb.	
	s.	*d.*	*s.*	*d.*
Erythrosin	2	0	—	
Ether	0	5	5	6
Gelatine, Nelson's No. 1	0	6	4	8
Glycerine	0	2	1	2
Gold, Chloride (2*s.* per tube.)				
Hydrogen, Peroxide	—		1	6
Hydroquinone	1	10	—	
Iodine	1	4	—	
Iron, Ammonio-citrate	0	3	2	6
„ Perchloride	0	2	1	3
„ Sulphate	—		0	2
Lead, Acetate	0	3	2	0
Lime, Chloride	0	1	1	0
Magnesium Powder	2	0	—	
Mercury, Bichloride	0	3	4	0
Potash, Bichromate	—		0	6
„ Carbonate	—		0	8
„ Ferricyanide	0	2	1	4
„ Neutral Oxalate	0	1	0	10
Potassium, Bromide	0	2	2	0
„ Cyanide	0	2	1	4
„ Iodide	1	2	—	
„ Meta-bisulphite	0	3	3	6
Silver, Nitrate	3	0	—	
Soda, Acetate	0	2	1	6
„ Carbonate	0	1	0	6
„ Hyposulphite	—		0	3
„ Sulphite	0	1	0	8
Spirit, Methylated (6*d.* per pint.)				
Tripoli	0	2	2	0
Uranium, Nitrate	2	0	—	
Zinc, Oxide	0	1	1	0